

REMARKS/ARGUMENTS

Claims 1-4, 15-20, 27-32, and 36 are now pending. Claims 5-14, 21-26, 33-35, and 37 had been canceled and withdrawn from consideration as the result of an earlier restriction requirement. No claims stand allowed.

Regarding Amendments

Claims 1, 15, 27-32 and 36 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The amendment also contains minor changes of a clerical nature. The text of claims 2-4 and 16-20 is unchanged, but their meaning is changed because they depend from amended claims. No "new matter" has been added by the amendment.

The 35 U.S.C. §112 Rejection, Second Paragraph

Claims 28-32 stand rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.

The claims 28-32 have been amended so as to provide proper and sufficient antecedent basis of "first network device." With this amendment, withdrawal of the 35 U.S.C. §112, second paragraph, rejection is respectfully requested.

The 35 U.S.C. §103 Rejection

Claims 1-4, 15-20, 27-32, and 36 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Bestavros et al. (U.S. Pat. No. 6,370,584) in view of Kanai (U.S. Pat. No. 5,912,891) or Nilakantan et al. (U.S. Pat. No. 5,526,489), among which claims 1, 15, 27, and 36 are independent claims. This rejection is respectfully traversed.

According to M.P.E.P. §2143,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Claim 1 defines a method for assigning private Internet Protocol ("IP") addresses to network devices in a cluster. Each of the network devices are capable of interconnecting at least two network segments and forwarding data frames from one network segment to another, as recited in claim 1 as amended. The claimed method comprises (a) reading the Media Access Control ("MAC") address of a first network device, (b) calculating a private IP address as a function of said MAC address, (c)

assigning said private IP address to said first network device, and (d) communicating with said first network device using said private IP address.

In the Office Action, the Examiner alleges that Bestavros discloses a cluster of network devices comprising assigning private IP addresses (IP_1) to the first network device and communicating with the first network device using the private IP address wherein the first network device is a LAN switch. Especially, the Examiner equates a plurality of host devices 10, 12, 14, 16, and 18 of Bestavros (FIG. 1, column 2, lines 64-66 thereof) with the claimed cluster of the network devices.

However, the host devices of Bestavros are not "network devices" as defined in claim 1. Each host device (host computer) of Bestavros serves requests from client devices and reroute requests to other host devices in the cluster (column 2, lines 15-18 thereof). That is, Bestavros only discloses a well-known client-server system, and the hosts (servers) are within the same local area network (LAN) 22 (FIG. 1 thereof) and only serves a client or communicates with a peer host device in the same LAN, not interconnecting other network segments. As is more clearly shown in FIG. 2 of Bestavros, the host devices (server computers) 38 through 52 are confined in a corresponding virtual LAN segment (Site 1 Network or Site 2 Network) and not designed to interface other virtual LAN segments. Accordingly, Bestavros fails to teach or disclose a cluster of network devices each of which are capable of interconnecting at least two network segments and forwarding data frames from one network segment to another, as recited in claim 1.

Therefore, Bestavros, whether considered alone or combined with or modified by Kanai or Nilakantan, does not teach or suggest the cluster of the network devices as claimed in claim 1. Claims 15, 27, and 36 also include substantially the same distinctive feature as claim 1. Accordingly, it is respectfully requested that the rejection of claims based on Bestavros be withdrawn.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Regarding Kanai

The Examiner also alleges, in the Office Action, that Kanai teaches calculating the private IP address as a function of the MAC address wherein the private IP address is calculated by adding the values of one or more bytes of the MAC address to a base private IP address. However, the allegation is not correct for the following reasons:

In Kanai, each of the LAN emulation clients **112** and **113** (of the emulated LAN **110**) is assigned with specific IP, ATM and MAC addresses. That is, the emulation client **112** is assigned with IP address "IP.110.2", ATM address "ATM.110.2", and MAC address "MAC. 110.2", and the emulation client **113** is assigned with IP address "IP.110.3", ATM address "ATM.110.3", and MAC address "MAC. 110.3" (column 8, lines 54-62). Accordingly, each of the emulation clients **112** and **113** of the same emulated LAN **110** has the IP address which has the common portion ("IP") and an

added portion (“110.2” or “110.3”) identifying the respective emulation client. The added portion “110.2” is common among the IP address, the ATM address, and the MAC address for the same emulation client. That is, the “110.2” portion is not based on or function of the MAC address, but it is assigned in accordance with the identity of the emulation client, independent of the MAC address thereof. Therefore, Kanai does not teach or suggest calculating a private IP address as a function of said MAC address, as recited in claim 1.

Regarding Nilakantan

The Examiner further alleges that Nilakantan also teaches assigning an IP address based on the MAC address. Nilakantan uses the reverse address resolution protocol (RARP) which allows a machine without a configured IP address to obtain an IP address from a remote server (column 2, lines 23-24 thereof). In Nilakantan, the machine broadcasts a request including its physical network address (MAC address) to uniquely identify itself, and the server maps the MAC address into an IP address (column 2, lines 25-28 thereof). The client’s acceptance process 103 receives the IP address from the sever (column 6, lines 8-11 of Nilakantan). However, as is well understood by one of ordinary skill in the art, such “mapping” merely provides one to one correspondence between the MAC address and the IP address, without involving any calculation or dependency, and most of all, the IP address is a *public* IP address, which is capable of universally and uniquely locating the client in the network. Furthermore, Nilakantan suggests that the reverse address resolution is independent of the physical network address (MAC address) (column 6, lines 19-20), and also an IP address is assigned even

if the MAC address of the client is unavailable (column 6, lines 54-58). Accordingly, Nilakantan fails to teach or suggest calculating a private IP address as a function of said MAC address, as recited in claim 1.

Accordingly, Bestavros, whether considered alone or combined with or modified by Kanai or Nilakantan, does not teach or suggest the claimed invention. It is respectfully requested the rejections based on Bestavros, Kanai and/or Nilakantan be withdrawn.

Dependent Claims

Claims 2-4 depend from claim 1, claims 16-20 depend from claim 15, and claims 28-32 depend from claim 27, and thus include the limitations of respective independent claims. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
THELEN REID & PRIEST, LLP

Dated: November 17, 2003


Masako Ando

Limited Recognition under 37 CFR §10.9(b)

Thelen Reid & Priest LLP
P.O. Box 640640
San Jose, CA 95164-0640
Tel. (408) 292-5800
Fax. (408) 287-8040




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UNITED STATE PATENT AND TRADEMARK OFFICE**

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